CLAIMS

We claim:

1. An isolated polypeptide having an amino acid sequence that is at least 70% identical to a reference amino acid sequence that is either the amino acid sequence of SEQ ID NO:2 or amino acid residues 96 to 126 of SEQ ID NO:2, wherein the isolated polypeptide is characterized by at least one of the following properties: (a) the polypeptide specifically binds with an antibody that specifically binds with a polypeptide consisting of the amino acid sequence of SEQ ID NO:2, and (b) the polypeptide is capable of effecting epithelial morphogenesis.

2. The isolated polypeptide of claim 1, wherein the isolated polypeptide has an amino acid sequence that is at least 80% identical to the amino acid sequence of either the amino acid sequence of SEQ ID NO:2 or amino acid residues 96 to 126 of SEQ ID NO:2.

3. The isolated polypeptide of claim 1, wherein the isolated polypeptide has an amino acid sequence that is at least 90% identical to the amino acid sequence of either the amino acid sequence of SEQ ID NO:2 or amino acid residues 96 to 126 of SEQ ID NO:2.

4. The isolated polypeptide of claim 1, wherein the isolated polypeptide comprises either the amino acid sequence of SEQ ID NO:2, or amino acid residues 96 to 126 of SEQ ID NO:2.

5. An isolated nucleic acid molecule, wherein the nucleic acid molecule is selected from the group consisting of (a) a nucleic acid molecule having the nucleotide sequence of SEQ ID NO:3, (b) a nucleic acid molecule encoding the amino acid sequence of SEQ ID NO:2, and (c) a nucleic acid molecule that remains hybridized following stringent wash conditions to a nucleic acid molecule having the nucleotide sequence of nucleotides 189-1049 of SEQ ID NO:1, or the complement of nucleotides 189-1049 of SEQ ID NO:1.

6. The isolated nucleic acid molecule of claim 5, wherein any difference between the amino acid sequence encoded by the nucleic acid molecule and the corresponding amino acid sequence of SEQ ID NO:2 is due to a conservative amino acid substitution.

7. The isolated nucleic acid molecule of claim 5, comprising the nucleotide sequence of nucleotides 189 to 1049 of SEQ ID NO:1.

8. A vector, comprising the isolated nucleic acid molecule of claim 7.

9. An expression vector, comprising the isolated nucleic acid molecule of claim 7, a transcription promoter, and a transcription terminator, wherein the promoter is operably linked with the nucleic acid molecule, and wherein the nucleic acid molecule is operably linked with the transcription terminator.

10. A recombinant host cell comprising the expression vector of claim 9, wherein the host cell is selected from the group consisting of bacterium, yeast cell, fungal cell, insect cell, mammalian cell, and plant cell.

11. A method of using the expression vector of claim 9 to produce Zepmo1 protein, the method comprising culturing recombinant host cells that comprise the expression vector and that produce the Zepmo1 protein.

12. An antibody or antibody fragment that specifically binds with the polypeptide of claim 4.

13. The antibody of claim 12, wherein the antibody is selected from the group consisting of: (a) polyclonal antibody, (b) murine monoclonal antibody, (c) humanized antibody derived from (b), and (d) human monoclonal antibody.

14. The antibody fragment of claim 12, wherein the antibody fragment is selected from the group consisting of $F(ab')_2$, $F(ab)_2$, Fab', Fab, Fv, scFv, and minimal recognition unit.

15. A method of detecting the presence of *Zepmo1* RNA in a biological sample, comprising:

(a) contacting a *Zepmo1* nucleic acid probe under hybridizing conditions with either (i) test RNA molecules isolated from the biological sample, or (ii) nucleic acid molecules synthesized from the isolated RNA molecules, wherein the probe has a nucleotide sequence comprising either a portion of the nucleotide sequence of the nucleic acid molecule of claim 7, or its complement, and

(b) detecting the formation of hybrids of the nucleic acid probe and either the test RNA molecules or the synthesized nucleic acid molecules,

wherein the presence of the hybrids indicates the presence of *Zepmo1* RNA in the biological sample.

16. A method of detecting the presence of Zepmo1 in a biological sample, comprising:

(a) contacting the biological sample with the antibody, or antibody fragment, of claim 12, wherein the contacting is performed under conditions that allow the binding of the antibody or antibody fragment to the biological sample, and

(b) detecting any of the bound antibody or bound antibody fragment.

17. An anti-idiotype antibody, or anti-idiotype antibody fragment, that specifically binds with the antibody or antibody fragment of claim 12, wherein the anti-idiotype antibody, or anti-idiotype antibody fragment, is capable of effecting epithelial morphogenesis.

18. A fusion protein, comprising the polypeptide of claim 4.

19. The fusion protein of claim 18, further comprising an immunoglobulin moiety.

20. A nucleic acid molecule that encodes the fusion protein of claim 18.